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## ABSTRACT

A pressure vessel comprising a fiber reinforced resin layer (4), which is made of a reinforced fiber (3) impregnated in resin, on a surface of a vessel body (2), wherein the pressure vessel is produced by forming the fiber reinforced resin layer (4) on the surface of the vessel body, applying an internal pressure and plastically deforming (subjecting to an auto-fretage) the vessel body (2) such that a distortion of the surface of the vessel body in a circumferential direction of the vessel body be in a range of 0.7% to 0.9%, in order to apply a pre-stress to the vessel body (2) and the fiber reinforced resin layer (4), and wherein the pressure vessel has a burst pressure, which is 2.2 to 2.8 times as large as a charging pressure. Since the pressure vessel (1) has excellent fatigue property and burst property, and a reduced weight, this is preferably used as a storage vessel for high pressure gas.

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